Claims.

1 A bistatic laser radar device comprising;

a transmit channel for forming a focused transmit beam, and

a receive channel for forming a focused receive beam,

wherein the device is arranged such that the focus of the transmit beam and the focus of the receive beam fall on a common axis when focused to a distance within the operable distance range of the device.

2. A device according to claim 1 wherein the transmit channel comprises a first optical arrangement configured to form the focused transmit beam and having at least one lens.

3 . A device according to claim 2 wherein laser radiation is passed to the first optical arrangement via a transmit optical fibre cable.

4. A device according to claim 3 wherein the focus of the transmit beam is adjustable by variation of the relative position of the first optical arrangement with respect to the exit aperture of the transmit optical fibre cable.

5. A device according to claim 4 wherein the exit aperture is linearly translatable with respect to the first optical arrangement.

6. A device according to any one of the preceding claims wherein the receive channel comprises a second optical arrangement configured to form the focused receive beam and having at least one lens.

7. A device according to claim 6 wherein the second optical arrangement is configured to couple received radiation in to a receive optical fibre cable.

8. A device according to claim 7 wherein the focus of the receive beam is adjustable by variation of the relative position of the second optical arrangement with respect to the entry aperture of the receive optical fibre

9. A device according to claim 8 wherein the entry aperture is linearly translatable with respect to the second optical arrangement

10. A device according to claim 9 when dependent on claim 5 in which;

the exit aperture of the transmit optical fibre is linearly translatable along the optical axis of the first optical arrangement, and

the entry aperture of the receive optical fibre is linearly translatable along an axis arranged at a predetermined angle to the optical axis of the second optical arrangement.

11. A device according to claim 10 wherein the predetermined angle is calculated from the inverse tangent of the ratio of the separation of the transmit channel and receive channel to the focal length of the optical arrangement.

12. A device according to any preceding claim and further comprising at least one additional receive channel.

13. A device according to claim 12 and comprising at least one additional receive channel to provide at least one additional receive beam, wherein the focus of the at least one additional receive beam is arranged to intersect the focus of the transmit beam within the operable distance range of the device.

14. A device according to any one of the preceding claims wherein the device configured to interact with a soft target.

15. A device according to any one of claims 1 to 13 wherein the device configured to interact with a distributed target.

16. A device according to any one of the preceding claims wherein the transmit beam is formed from radiation having a wavelength in the region of 1.55μm.

17. A device as substantially hereinbefore described with reference to figure 4.